

JETSCAPE

Qu'est-ce que c'est?

## **The Jet Energy-loss Tomography with a Statistical and Computationally Advanced Program Envelope (JETSCAPE) Collaboration**

...jets provide powerful tools to study the internal structure of the plasma. However, interpretation of jet measurements requires sophisticated numerical modeling and simulation, and comparison of such theory calculations with experimental data demands advanced statistical tools. The JETSCAPE Collaboration is an interdisciplinary team of physicists, computer scientists, and statisticians developing a comprehensive software framework providing a systematic, rigorous approach to address this program. ...

The JETSCAPE Collaboration will develop a scalable and portable open source software package to replace a variety of existing codes. The modular integrated software framework will consist of interacting generators to simulate (i) wave functions of the incoming nuclei, (ii) viscous fluid dynamical evolution of the hot plasma, and (iii) transport and modification of jets in the plasma. Integrated advanced statistical analysis tools will provide non-expert users with quantitative methods to validate novel theoretical descriptions of such jet modification, by comparison with the complete set of current experimental data...

- PI's: Abhijit Majumder, Bass, Fries, Gale, Heinz, Jacak, Jacobs, Putschke, Roland, Schwiebert, Soltz, Wang, Wolpert
- Recommended for funding at NSF (\$3.6M total for postdocs, workshops etc over 4 yrs)
- Start date: June 2016?
- sPHENIX: Work on interface of sPHENIX simulations/analyses with JETSCAPE (Livermore, MIT, Wayne State,...)